

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/570,047  
Source: IFWP  
Date Processed by STIC: 3-8-06

***ENTERED***



IEWP

## RAW SEQUENCE LISTING

DATE: 03/08/2006

PATENT APPLICATION: US/10/570,047

TIME: 13:21:03

Input Set : A:\39363a.txt

Output Set: N:\CRF4\03072006\J570047.raw

```

3 <110> APPLICANT: Jessberger, et al.
5 <120> TITLE OF INVENTION: METHODS FOR IDENTIFYING, TREATING, AND INDUCING INFERTILITY USING
6   SMC1 BETA
8 <130> FILE REFERENCE: 29636/39363A
-> 10 <140> CURRENT APPLICATION NUMBER: US/10/570,047
-> 10 <141> CURRENT FILING DATE: 2006-02-28
10 <150> PRIOR APPLICATION NUMBER: US 60/499,317
11 <151> PRIOR FILING DATE: 2003-08-29
13 <160> NUMBER OF SEQ ID NOS: 13
15 <170> SOFTWARE: PatentIn version 3.2
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 4056
19 <212> TYPE: DNA
20 <213> ORGANISM: Mus musculus
22 <400> SEQUENCE: 1
23 ctgaggcacg gcgcgcagcc atggggcacc ttgagctgct gctcgtggag aatttcaagt      60
25 cgtggcgagg ccgccaggct atcgccctt tcaagagggt cacctgcatc attggcccca      120
27 acggctccgg aaaatctaata gtaatggatg cacttagttt tgtaatggga gaaaagacaa      180
29 ctaattttaag agtaaaaaac attcaagaac ttattcatgg agcacatact ggaaaacctg      240
31 tttcttcttc tgcaagtgtg acaattatat acatagagga cagtggagaa gagaaaacat      300
33 tcacaaggat tatccgaggg ggggtgctcag aatatcattt tggggataaa cccgtgagtc      360
35 gttctgtgta ttagcccgag ttggaaaaca taggcataat agtcaaagca cagaactgtc      420
37 tagtttttca gggaaactgta gagtcaatat ccatgaaaaa gcccaaagag agaaccagtc      480
39 tttttgaaga aatcagtagt tcaggagaat ttataggaga atatgaggca aagaaaaaga      540
41 aattacaaaa agtcgaagaa gatgcacaat ttcattttta tgtgaaaaaa aatgtagctg      600
43 cagaacggaa gcatgcaaaa atagagaaaag aagaggcaga acattaccaa aatctccttg      660
45 aagaattgaa aataaacaag atacaactga tgcttttcca actatattat aatgaggaaa      720
47 aaatcaatgt tttaaactact gaattagagc aaatggacgg gaatttaagt gttgtaaaag      780
49 acactctttc tcaccatgaa aacatattta aagctaagaa aaaggattat ggaatgttaa      840
51 ctagacaact acagcaaaca gcaaaagaac tgaaatctgt tgaagcaatt ttaaatacaga      900
53 agaggcctca gtacattaag gctaaagaaa acacttctca tcatctaaaa aaattagatt      960
55 tgtctaagaa attgataaca gacaatgaaa aacaatgttc taagcaggaa gatggcatac     1020
57 gagccttagt ggcagaactg gctgatttgg atagagcatg gaaaagtgtt gaaaagcaga     1080
59 tggaagagaa aatcttacaa aaaggcgag atattgaatt ggaaaatagc cagctggatc     1140
61 gttacaaact gcttaaggag caagtacagc ggaagggttg tataatgaca caacaactgg     1200
63 aaaaactgca gtgggaacag aaggcagaaa aagaaagact tgcatttgaa aagaggaggc     1260
65 atggagacac tcagggaat ctaaaacaga taaaagaaca aatagaagag cataaaaaac     1320
67 gaatagagaa gttggaggaa tatacaaaga cgtgcatgga ttgcttgga gataaaaaac     1380
69 agcaagaaga ggccctgaaa aaagaaattg aaaatacgaa atcaagaatg tctgaagtta     1440
71 atgaagaatt gagtcttatt agaaatgaat tgcaaatgc tgggaattgat aaccatgagg     1500
73 gaaaacgtca gcagaaaaga gcagaagttc tggaacacct taaaagactt taccagatt     1560
75 ctgtgtttgg aagactgctt gatctgtgtc atcctattca taagaagtac cagctggctg     1620
77 tgactaagct ttttggccgg tacatggttg ccattgttgt agcctcagaa aagatagcga     1680

```

## RAW SEQUENCE LISTING

DATE: 03/08/2006

PATENT APPLICATION: US/10/570,047

TIME: 13:21:03

Input Set : A:\39363a.txt

Output Set: N:\CRF4\03072006\J570047.raw

```

79 aagattgtat tctgatttctg aaggcagaaa gagctgaacc tgagacattc cttgctctag 1740
81 attaccttga tatcaagcca atcaatgaac gactaaggga aattaaaggc tgtaagatga 1800
83 tgatcgatgt tataaagacc cagtttcttc agctgaagaa agtgattcag tttgtttgtg 1860
85 gaaatggcct tgtctgtgag actgtggaag aagcaagaca tattgcattc ggtggacctg 1920
87 aaagacggaa ggcagtagca cttgatggaa cactgttttt gaaatctgga gtgatttctg 1980
89 gaggggtcaag tgacttaaaag cacaaagctc tgtgctggga tgagaaaagag ttacacaatc 2040
91 taagagacaa aagaagccaa ctagtccaag agctaaagga gttaaatgaag aactccgca 2100
93 aggaaacaga tctgaagcaa atacagactt tagtacaagg aaccaatata cgactcaa 2160
95 attcacaaaa tgaactagag atgattaaaa agaagcacct tgctacattt taccgggaac 2220
97 aatctcagct acaaagtga ttactgaata ttgatttctca atgtactatg ttgagtgaag 2280
99 gaatcaacaa acagcaacaa aaaattgaag aatttcaaga taagatagat gaggtagaag 2340
101 atgacatatt ccaagacttc tgtgaagaaa ttggtgtgga aaatatccgt gaatttgaga 2400
103 ataaacatgt taaacagcag caagaaaatg atcaaaaaag attagagttt gaaaaacaaa 2460
105 aaactcggct taatattcag ctccaatata gtcgaaatga gcttaagaag aaactgaata 2520
107 atatcgacac attaaaaacc acaatccaga agggcaaaaga agatattgat aacctaaaaa 2580
109 agaccgaaga agaattgtctg aaaattgttg aggaactcat ggtgaagcaa gagcaaatta 2640
111 aggaagtgtc tgccacacag agttccaaca ttgaaaaaat tcacatacaa attgaagagg 2700
113 aacgcaagaa ggttttggct gttgataggg aagttggaag attacagaag gaagttgtaa 2760
115 tcattcaggg ttctttggaa cagaaactgc tagagaaaca taacttgctg ctagattgca 2820
117 aagttcaaga cattgacata agtcttgtgc tggggtcatt ggaggacatc attgaaatgg 2880
119 agctaactga aacagaaagc acccaggcaa cagctgatat ctatgagaaa gaagcatcca 2940
121 tccaaataga ctacagccct ctaagggagg atttaaaggc tctacaatca gataaggagg 3000
123 tggaggccca ccttactctc cttctacagc aagtagcatc ccaagaaaac actctactga 3060
125 agactacagc tccaaacttg cgagcacagg agaacttaaa gactgtcaga gacaagtttc 3120
127 aagaatctgc agatgttttt gagggccagca gaaaggaagc cagaatatgt aggcaagagt 3180
129 ttgaacaggt gaaaagacgg aggtacgatg ctttcagtca atgttttgaa cacatctcag 3240
131 tctcaattga tcaaactctac aagaagctct gcaggaacaa cagtgcccgag gcattttcta 3300
133 gccagagaa cctgaagaa ccttacttag atggaattag ctacaactgt gtggctccag 3360
135 gcaaacggtt catgcccag gacaacctgt cagggggaga aaagtgtgtg gctgctctgg 3420
137 ctcttctgtt tgctgtacac agttttcggc ctgctccatt ctttgtatta gatgaagtag 3480
139 atgcagccct ggacaatact aacattggca aagtctcaag ttacatcaa gagcagagtc 3540
141 aggaacagtt tcagatgata atcatttccc tgaaagagga gttctactcc aaagctgatg 3600
143 cactgatagg cgtctacca gagcacaatg agtgcattgt cagccatgtg ttgactctgg 3660
145 acctttccaa gtatccagac accgaagacc aagaaggcag caggagccac cggaagccca 3720
147 gaggaccag agtatcaatg tctccaaagt ctccccagtc tcgttagaaa tgagtatact 3780
149 cttgaacagc caccagctat agaagcttta cctgaccct gtggagggtca ggccagtctc 3840
151 tgttttagacc catgtgtcat agaagaaaaa tctcttacca ttttagtaga aaaaaaacta 3900
153 tagccactc agctaaggag tgctcagtgt cattccaatg gaggttccta tggcatcaat 3960
155 gaatgaggt tatgtttttc ttttgctttt aagggttttt gttttgaaac aaattggtta 4020
157 taaaattttg aattctgcaa aaaaaaaaaa aaaaaa 4056
160 <210> SEQ ID NO: 2
161 <211> LENGTH: 1248
162 <212> TYPE: PRT
163 <213> ORGANISM: Mus musculus
165 <400> SEQUENCE: 2
167 Met Gly His Leu Glu Leu Leu Leu Val Glu Asn Phe Lys Ser Trp Arg
168 1 5 10 15
171 Gly Arg Gln Val Ile Gly Pro Phe Lys Arg Phe Thr Cys Ile Ile Gly
172 20 25 30

```

## RAW SEQUENCE LISTING

DATE: 03/08/2006

PATENT APPLICATION: US/10/570,047

TIME: 13:21:03

Input Set : A:\39363a.txt

Output Set: N:\CRF4\03072006\J570047.raw

```

175 Pro Asn Gly Ser Gly Lys Ser Asn Val Met Asp Ala Leu Ser Phe Val
176          35          40          45
179 Met Gly Glu Lys Thr Thr Asn Leu Arg Val Lys Asn Ile Gln Glu Leu
180      50          55          60
183 Ile His Gly Ala His Thr Gly Lys Pro Val Ser Ser Ser Ala Ser Val
184 65          70          75          80
187 Thr Ile Ile Tyr Ile Glu Asp Ser Gly Glu Glu Lys Thr Phe Thr Arg
188          85          90          95
191 Ile Ile Arg Gly Gly Cys Ser Glu Tyr His Phe Gly Asp Lys Pro Val
192          100          105          110
195 Ser Arg Ser Val Tyr Val Ala Gln Leu Glu Asn Ile Gly Ile Ile Val
196      115          120          125
199 Lys Ala Gln Asn Cys Leu Val Phe Gln Gly Thr Val Glu Ser Ile Ser
200      130          135          140
203 Met Lys Lys Pro Lys Glu Arg Thr Gln Phe Phe Glu Glu Ile Ser Thr
204 145          150          155          160
207 Ser Gly Glu Phe Ile Gly Glu Tyr Glu Ala Lys Lys Lys Lys Leu Gln
208          165          170          175
211 Lys Ala Glu Glu Asp Ala Gln Phe His Phe Asn Val Lys Lys Asn Val
212          180          185          190
215 Ala Ala Glu Arg Lys His Ala Lys Ile Glu Lys Glu Glu Ala Glu His
216          195          200          205
219 Tyr Gln Asn Leu Leu Glu Glu Leu Lys Ile Asn Lys Ile Gln Leu Met
220      210          215          220
223 Leu Phe Gln Leu Tyr Tyr Asn Glu Glu Lys Ile Asn Val Leu Asn Thr
224 225          230          235          240
227 Glu Leu Glu Gln Met Asp Gly Asn Leu Ser Val Val Lys Asp Thr Leu
228          245          250          255
231 Ser His His Glu Asn Ile Phe Lys Ala Lys Lys Lys Asp Tyr Gly Met
232          260          265          270
235 Leu Thr Arg Gln Leu Gln Gln Thr Ala Lys Glu Leu Lys Ser Val Glu
236          275          280          285
239 Ala Ile Leu Asn Gln Lys Arg Pro Gln Tyr Ile Lys Ala Lys Glu Asn
240      290          295          300
243 Thr Ser His His Leu Lys Lys Leu Asp Leu Ser Lys Lys Leu Ile Thr
244 305          310          315          320
247 Asp Asn Glu Lys Gln Cys Ser Lys Gln Glu Asp Gly Ile Arg Ala Leu
248          325          330          335
251 Val Ala Glu Leu Ala Asp Leu Asp Arg Ala Trp Lys Ser Phe Glu Lys
252          340          345          350
255 Gln Met Glu Glu Lys Ile Leu Gln Lys Gly Arg Asp Ile Glu Leu Glu
256          355          360          365
259 Asn Ser Gln Leu Asp Arg Tyr Lys Leu Leu Lys Glu Gln Val Arg Arg
260      370          375          380
263 Lys Val Gly Ile Met Thr Gln Gln Leu Glu Lys Leu Gln Trp Glu Gln
264 385          390          395          400
267 Lys Ala Glu Lys Glu Arg Leu Ala Phe Glu Lys Arg Arg His Gly Asp
268          405          410          415
271 Thr Gln Gly Asn Leu Lys Gln Ile Lys Glu Gln Ile Glu Glu His Lys

```

## RAW SEQUENCE LISTING

DATE: 03/08/2006

PATENT APPLICATION: US/10/570,047

TIME: 13:21:03

Input Set : A:\39363a.txt

Output Set: N:\CRF4\03072006\J570047.raw

```

272          420          425          430
275 Lys Arg Ile Glu Lys Leu Glu Glu Tyr Thr Lys Thr Cys Met Asp Cys
276          435          440          445
279 Leu Glu Asp Lys Lys Gln Gln Glu Glu Ala Leu Lys Lys Glu Ile Glu
280          450          455          460
283 Asn Thr Lys Ser Arg Met Ser Glu Val Asn Glu Glu Leu Ser Leu Ile
284 465          470          475          480
287 Arg Asn Glu Leu Gln Asn Ala Gly Ile Asp Asn His Glu Gly Lys Arg
288          485          490          495
291 Gln Gln Lys Arg Ala Glu Val Leu Glu His Leu Lys Arg Leu Tyr Pro
292          500          505          510
295 Asp Ser Val Phe Gly Arg Leu Leu Asp Leu Cys His Pro Ile His Lys
296          515          520          525
299 Lys Tyr Gln Leu Ala Val Thr Lys Leu Phe Gly Arg Tyr Met Val Ala
300          530          535          540
303 Ile Val Val Ala Ser Glu Lys Ile Ala Lys Asp Cys Ile Arg Phe Leu
304 545          550          555          560
307 Lys Ala Glu Arg Ala Glu Pro Glu Thr Phe Leu Ala Leu Asp Tyr Leu
308          565          570          575
311 Asp Ile Lys Pro Ile Asn Glu Arg Leu Arg Glu Ile Lys Gly Cys Lys
312          580          585          590
315 Met Met Ile Asp Val Ile Lys Thr Gln Phe Pro Gln Leu Lys Lys Val
316          595          600          605
319 Ile Gln Phe Val Cys Gly Asn Gly Leu Val Cys Glu Thr Val Glu Glu
320          610          615          620
323 Ala Arg His Ile Ala Phe Gly Gly Pro Glu Arg Arg Lys Ala Val Ala
324 625          630          635          640
327 Leu Asp Gly Thr Leu Phe Leu Lys Ser Gly Val Ile Ser Gly Gly Ser
328          645          650          655
331 Ser Asp Leu Lys His Lys Ala Leu Cys Trp Asp Glu Lys Glu Leu His
332          660          665          670
335 Asn Leu Arg Asp Lys Arg Ser Gln Leu Val Gln Glu Leu Lys Glu Leu
336          675          680          685
339 Met Lys Thr Leu Arg Lys Glu Thr Asp Leu Lys Gln Ile Gln Thr Leu
340          690          695          700
343 Val Gln Gly Thr Asn Thr Arg Leu Lys Tyr Ser Gln Asn Glu Leu Glu
344 705          710          715          720
347 Met Ile Lys Lys Lys His Leu Ala Thr Phe Tyr Arg Glu Gln Ser Gln
348          725          730          735
351 Leu Gln Ser Glu Leu Leu Asn Ile Asp Ser Gln Cys Thr Met Leu Ser
352          740          745          750
355 Glu Gly Ile Asn Lys Gln Gln Gln Lys Ile Glu Glu Phe Gln Asp Lys
356          755          760          765
359 Ile Asp Glu Val Glu Asp Asp Ile Phe Gln Asp Phe Cys Glu Glu Ile
360          770          775          780
363 Gly Val Glu Asn Ile Arg Glu Phe Glu Asn Lys His Val Lys Gln Gln
364 785          790          795          800
367 Gln Glu Asn Asp Gln Lys Arg Leu Glu Phe Glu Lys Gln Lys Thr Arg
368          805          810          815

```

## RAW SEQUENCE LISTING

DATE: 03/08/2006

PATENT APPLICATION: US/10/570,047

TIME: 13:21:03

Input Set : A:\39363a.txt

Output Set: N:\CRF4\03072006\J570047.raw

```

371 Leu Asn Ile Gln Leu Glu Tyr Ser Arg Asn Gln Leu Lys Lys Lys Leu
372      820      825      830
375 Asn Asn Ile Asp Thr Leu Lys Thr Thr Ile Gln Lys Gly Lys Glu Asp
376      835      840      845
379 Ile Asp Asn Leu Lys Lys Thr Glu Glu Glu Cys Leu Lys Ile Val Glu
380      850      855      860
383 Glu Leu Met Val Lys Gln Glu Gln Ile Lys Glu Val Leu Ala Thr Gln
384 865      870      875      880
387 Ser Ser Asn Ile Glu Lys Ile His Ile Gln Ile Glu Glu Glu Arg Lys
388      885      890      895
391 Lys Val Leu Ala Val Asp Arg Glu Val Gly Lys Leu Gln Lys Glu Val
392      900      905      910
395 Val Ile Ile Gln Gly Ser Leu Glu Gln Lys Leu Leu Glu Lys His Asn
396      915      920      925
399 Leu Leu Leu Asp Cys Lys Val Gln Asp Ile Asp Ile Ser Leu Val Leu
400      930      935      940
403 Gly Ser Leu Glu Asp Ile Ile Glu Met Glu Leu Thr Glu Thr Glu Ser
404 945      950      955      960
407 Thr Gln Ala Thr Ala Asp Ile Tyr Glu Lys Glu Ala Ser Ile Gln Ile
408      965      970      975
411 Asp Tyr Ser Pro Leu Arg Glu Asp Leu Lys Ala Leu Gln Ser Asp Lys
412      980      985      990
415 Glu Val Glu Ala His Leu Thr Leu Leu Leu Gln Gln Val Ala Ser Gln
416      995      1000      1005
419 Glu Asn Thr Leu Leu Lys Thr Thr Ala Pro Asn Leu Arg Ala Gln
420      1010      1015      1020
423 Glu Asn Leu Lys Thr Val Arg Asp Lys Phe Gln Glu Ser Ala Asp
424      1025      1030      1035
427 Val Phe Glu Ala Ser Arg Lys Glu Ala Arg Ile Cys Arg Gln Glu
428      1040      1045      1050
431 Phe Glu Gln Val Lys Arg Arg Arg Tyr Asp Ala Phe Ser Gln Cys
432      1055      1060      1065
435 Phe Glu His Ile Ser Val Ser Ile Asp Gln Ile Tyr Lys Lys Leu
436      1070      1075      1080
439 Cys Arg Asn Asn Ser Ala Gln Ala Phe Leu Ser Pro Glu Asn Pro
440      1085      1090      1095
443 Glu Glu Pro Tyr Leu Asp Gly Ile Ser Tyr Asn Cys Val Ala Pro
444      1100      1105      1110
447 Gly Lys Arg Phe Met Pro Met Asp Asn Leu Ser Gly Gly Glu Lys
448      1115      1120      1125
451 Cys Val Ala Ala Leu Ala Leu Leu Phe Ala Val His Ser Phe Arg
452      1130      1135      1140
455 Pro Ala Pro Phe Phe Val Leu Asp Glu Val Asp Ala Ala Leu Asp
456      1145      1150      1155
459 Asn Thr Asn Ile Gly Lys Val Ser Ser Tyr Ile Lys Glu Gln Ser
460      1160      1165      1170
463 Gln Glu Gln Phe Gln Met Ile Ile Ile Ser Leu Lys Glu Glu Phe
464      1175      1180      1185
467 Tyr Ser Lys Ala Asp Ala Leu Ile Gly Val Tyr Pro Glu His Asn

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/570,047

DATE: 03/08/2006  
TIME: 13:21:04

Input Set : A:\39363a.txt

Output Set: N:\CRF4\03072006\J570047.raw

Base Note:

One or more of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> <223> fields of each sequence which presents at least one n or Xaa.

Seq#: 9; N Pos. 108,159,178,295,333 ✓

**VERIFICATION SUMMARY**

DATE: 03/08/2006

PATENT APPLICATION: US/10/570,047

TIME: 13:21:04

Input Set : A:\39363a.txt

Output Set: N:\CRF4\03072006\J570047.raw

10 M:270 C: Current Application Number differs, Replaced Current Application No  
10 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
1267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:60  
341 Repeated in SeqNo=9